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ABSTRACT

A study was undertaken to investigate the expectations college professors have of either their doctoral or career mentors, especially the differences in expectations held by male and female professors. From the literature, a list of 27 common expectations was developed into a questionnaire. Full-time tenure-track faculty at a college and a university in the northeast were surveyed by mail, with mail and telephone follow-ups. Results suggest that overall faculty expect doctoral mentors to assist with dissertation research, include proteges on their research teams, assist them in finding their first jobs, and educate them about the "rules of the game" in their profession. The were not likely to expect a doctoral mentor to be a friend or assist them in finding subsequent jobs. Overall expectations of career mentors were that they provide moral support, assist in finding subsequent jobs, educate about the "rules of the game," and assist in research and publications. In general few sex differences were found. For both doctoral and career mentors, male professors were more likely to expect a friendship with the mentors. However, women without mentors had the lowest expectations. Women who had mentors scorei as men did. Male professors expected more help from doctoral mentors in subsequent job-seeking. In general, sex differences appeared on the variables that had the lowest frequency. It is concluded that entering women college professors may benefit from more explicit statement of general expectations of mentors. (MSE)

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## Sex Differences in Expectations of Mentors

The importance of mentors for achieving career success in education has been acclaimed by individuals, supported by research, and sex differences in mentorships discussed or studied (Cameron, Note 1; Kundsin, 1974; Levinson, 1978; Reskin, 1979). In their description of the development of science, Gordon and Neumann predict that sponsorships and mentor effects will continue to be quite important for recognition in the field (1979).

Though the importance of mentors has been extensively documented and sex differences decried, sex differences in the expectations of mentors has not been extensively explored. In one study Dowdall and Boneparth (Note 2) studied the perceptions of proteges who were already professionals while they were in a federally organized program to promote the advancement of women and minorities in academic administration. Each protege applied to the program and had to ask someone to be her/his mentor, a somewhat more artificial situation than is generally conceived. Nevertheless, they found that female proteges had different perceptions of mentors than male proteges. Males were more likely than females to expect letters of recommendations and appointments to new positions, i.e. to expect those things that lead to later advancement. Women were more likely to choose a

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# Sex Differences in Expectations of Mentors

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mentor on the basis of personal knowledge while men more often based their choice on reputation, a decision which according to Long (1978) is likely to affect later advancement.

The Dowdall and Boneparth study documented sex differences in perceptions of mentors by proteges who were professors making the change into academic administration. However, expectations for mentors by men and women in college teaching positions may be different, and sex differences may or may not exist. Though many studies which documented the importance of mentors mentioned some expectations, no study has been done which investigates sex differences in specific expectations of mentors among college professors.

In order to achieve more clarity in the use of the term mentor, a distinction was made between someone who served as a mentor during one's doctoral years and someone (perhaps the same person) who served as a mentor early in one's career.

The purpose of this paper was to investigate whether expectations of either doctoral mentors or career mentors differed for male and female college professors, and whether the existence of a mentor in the professor's own life influenced expectations for either doctoral or career mentors.

## Method

### Instrument

The literature on mentors was searched and 27 expectations were formulated. A questionnaire consisting of these 27 expectations expressed in phrase form was constructed for this study. For example, two of the expectations were: introduce you to leaders in your discipline and assist in planning job seeking strategies. Respondents checked whether this was an expectation for the doctoral and/or the career mentor. The questionnaire was distributed to the sample through the campus mail of each person's institution. Follow-ups were conducted by mail one month later and by phone two months later.

In order to reduce the number of variables discussed and to measure each 'expectation' by more than one item the responses to each set (doctoral mentor and career mentor) of 27 expectations were factor analyzed using principal factoring with iteration and oblique rotation. For each set, doctoral mentor and career mentor, eight factors were identified. In each set, one factor consisted of only one item, and one factor was uninterpretable. This left six interpretable factors in each category. For both doctoral and career mentors two of these factors contain exactly the same items; the other four factors, though often similar in concept, do not contain exactly the same items for doctoral as for career mentors (Table 1).

These factors then were submitted to a Guttman scaling

analysis to determine their scalability. The coefficients of reproducability and scalability were above the acceptable levels (Table 1). Therefore these factors were used to create six new variables (indeces) for each category, doctoral mentor and career mentor, using a simple additive procedure. A higher score represents a higher expectation; conversely, a lower score represents a lower expectation. Differences by sex and whether or not one had had a mentor were tested by twelve two-way (2 x 2) analyses of variance, one for each new variable.

Subjects

Two institutions were selected for inclusion in the study, a university and a college. Both have good reputations in their geographic region (the Northeast) and the university had been highly rated on the basis on contributions to the AERA annual programs (Schubert, 1979). Both institutions are publicly supported and offer graduate level programs; the university offers doctoral degrees and the college, master's degrees.

All full-time tenure track faculty members in the School of Education in these two institutions were included. Since the university had separate graduate and undergraduate faculties, the sample was treated as three separate faculties. The total population of these faculties not counting administrators or those on leave of absence was 125, of which 96 returned usable questionnaires, an overall response rate of 76.8%. The response rate of each of these faculties was 88.5% (n=49; graduate faculty), 86.0% (n=23; undergraduate faculty) and 57.1% (n=24; college faculty).

## Results

### Overall Expectations

Table 2 reports the means and standard deviations for each of the six variables for both doctoral mentors and career mentors. In general it appears that for doctoral mentors mean expectations exceeded half the total possible points for four variables: Dissertation Research, Political Considerations, First Job Seeking, and Research Team. The means for the other two, Friendship and Subsequent Job Seeking, fell below half the total possible points. For career mentors, mean expectations exceeded half the total possible points for four variables: Political Considerations, Subsequent Job Seeking, Moral Support and Research & Publishing. Mean expectations for the other two variables, Friendship and First Job Seeking, fell below half the total possible points.

### Doctoral Mentor

As can be seen in Table 3, the results of the six two-way (2 x 2) ANOVA's on the doctoral mentor factors indicated that whether or not one had a mentor did not affect the expectations of doctoral mentors, but sex differences affected two of the six variables, Subsequent Job Seeking and Friendship. A follow-up t test indicated that males ($\bar{X}$=1.61, SD=1.57) were more likely to expect assistance from the career mentor in finding subsequent

jobs than were females ($\bar{X}$=.56,SD=1.04) and also were more likely ($\bar{X}$=1.00,SD=.91) to expect to have a close personal friendship with the mentor during and after the mentorship period than were females ($\bar{X}$=4,SD=.71). None of the interactions was significant.

Career Mentor

Table 4 presents the results of the six two way (2 x 2) ANOVA's on the career mentor factors. As with the doctoral mentor, there were sex differences in expectations of friendship with the mentor with males more likely ($\bar{X}$=1.09,SD=.92) to expect a close personal friendship with the mentor than did females ($\bar{X}$=.36,SD=.71). However, there was a significant interaction between sex and whether or not one had had a mentor. When this interaction was analyzed, using the Newman Kuels procedure, it was determined that males who had not had a mentor ($\bar{X}$=1.31,SD=.86) and females who had had a mentor ($\bar{X}$=1.25, SD=.96) were more likely to expect a close personal friendship than females who had not had a mentor ($\bar{X}$=.20, SD=.52).

The main effect of mentor also was significant for the factor, Research - Publishing, with those who had had a mentor more likely ($\bar{X}$=3.00,SD=1.18) than those who had not had a mentor ($\bar{X}$=2.16, SD=1.66) to expect the career mentor to include the protege on the research team and provide assistance with regard to publishing.

## Discussion

Overall, the faculty sampled seemed to expect doctoral mentors to assist proteges with their dissertation research, include proteges on their research teams, assist them in finding their first jobs and educate them to the "rules of the game" in their profession. They were not as likely to expect a doctoral mentor to be a friend to the protege or to assist them in finding subsequent jobs. The overall expectations of career mentors were that they should provide moral support, assistance in finding subsequent jobs, education with regard to the "rules of the game", and assistance with research and publishing. Expectations for friendship and providing assistance for finding the first job were lower.

In general there were few sex differences. For both the doctoral and career mentors, male college professors were more likely than female college professors to expect to have a friendship with the mentors. However, when sex differences and previous mentorship experience were investigated, women who had not had a mentor had the lowest expectations. Women who had had mentors scored like men regardless of their mentoring experience.

Furthermore, an important point needs to be noted. The mean scores of both males and females (1.10 or less) at most are approximately one/half the total points (2). The Guttman scaling

procedure used to produce this scale indicated that the item indicating friendship during the mentorship preceded the items indicating friendship after the mentorship period. Thus, in essence, the results indicate that generally males and females who had had a mentor expect a friendship during the mentorship period and females do not. Further, not many males and even fewer females had expectations for friendship after the mentorship period. Thus these results are also consistent with those of Levinson (1978) who found that friendships were not likely to continue after the mentorship was over. Rather, for Levinson's sample, it seemed that it was necessary to break away from the mentor to establish one's independence.

Male college professors had greater expectations than did female college professors with regard to doctoral mentors providing assistance in subsequent job seeking. Dowdall and Boneparth (Note 2) found similar sex differences except their study concerned mentors at the career level. However, in Dowdall and Boneparth's study proteges were hoping to make the transition from college teaching to academic administration. Perhaps the apparent contradiction between this study (no differences for career mentor) and that of Dowdall and Boneparth can be explained by the point that doctoral mentors and mentors in the Dowdall and Boneparth study may be the first mentor the protege has had for that particular career path.

It is interesting to note that the sex differences appeared on the variables that had the lowest mean scores in relation to the total possible points. On those variables whose mean scores exceeded one half the total possible points there were no sex differences. Thus it appears that there is general agreement that Political Considerations, Subsequent Job Seeking and those particular factors measuring research and/or publishing are important expectations for both doctoral and career mentors, that First job Seeking is an important expectation for doctoral mentors, and Moral Support is an important expectation for career mentors. For those working for educational equity, these expectations may be important components of a "planned mentorship." In particular entering women college professors may benefit from a more explicit statement of general expectations of mentors.

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Table 1. The coefficient of reproducability, coefficient of scalability, the numbers of the items on a particular factor and the total points per factor.

| Name of factor | Coefficient of Reproducability | Coefficient of Scalability | Items Numbered | Total Possible Points |
|---|---|---|---|---|
| **Doctoral Mentor** | | | | |
| Political Considerations | .9684 | .8846 | 13-16 | 4 |
| Friendship | .9677 | .9211 | 26-27 | 2 |
| Subsequent Job Seeking | .9734 | .9167 | 22-25 | 4 |
| First Job Seeking | .9574 | .8222 | 19-20 | 2 |
| Research Team | .9674 | .9178 | 8-9 | 2 |
| Dissertation Research | .9681 | .7780 | 10-11 | 2 |
| **Career Mentor** | | | | |
| Political Considerations | .9409 | .8429 | 13-16 | 4 |
| Friendship | .9451 | .8718 | 26-27 | 2 |
| Subsequent Job Seeking | .9780 | .9339 | 23-25 | 3 |
| First Job Seeking | .9385 | .8205 | 17-21 | 4 |
| Research & Publishing | .9000 | .7483 | 8,9,13,16 | 4 |
| Moral Support | .9457 | .7297 | 2,7 | 2 |

Table 2. Overall N's, mean's, S.D.'s and total possible points for doctoral and career mentors.

| | Overall | | | Total Possible Points |
|---|---|---|---|---|
| | N | $\bar{X}$ | S.D. | |
| Doctoral Mentor | | | | |
| Political Considerations | 95 | 2.91 | 1.51 | 4 |
| Friendship | 93 | .82 | .88 | 2 |
| Subsequent Job Seeking | 94 | 1.32 | 1.49 | 4 |
| First Job Seeking | 94 | 1.52 | .77 | 2 |
| Research Team | 92 | 1.21 | .93 | 2 |
| Disseration Research | 94 | 1.71 | .56 | 2 |
| Career Mentor | | | | |
| Political Considerations | 93 | 2.50 | 1.68 | 4 |
| Friendship | 91 | .86 | .91 | 2 |
| Subsequent Job Seeking | 91 | 2.09 | 1.43 | 3 |
| First Job Seeking | 91 | 1.71 | 1.88 | 4 |
| Research & Publishing | 90 | 2.41 | 1.56 | 4 |
| Moral Support | 92 | 1.60 | .70 | 2 |

Table 3. Two-way ANOVA's on doctoral mentor factors, sex by doctoral mentor

| Scale | Sex | Mentor | S x M | Residual |
|---|---|---|---|---|
| Political Considerations | | | | |
| MS | 1.95 | .05 | 1.30 | 2.34 |
| df | 1 | 1 | 1 | 81 |
| F | .82 | .02 | .54 | |
| Friendship | | | | |
| MS | 7.47 | .11 | .25 | .73 |
| df | 1 | 1 | 1 | 78 |
| F | 10.23** | .15 | .34 | |
| Subsequent Job Seeking | | | | |
| MS | 22.63 | 3.10 | 1.49 | 2.06 |
| df | 1 | 1 | 1 | 78 |
| F | 10.98*** | 1.50 | .72 | 10.98 |
| First Job Seeking | | | | |
| MS | 2.20 | 1.60 | .19 | .60 |
| df | 1 | 1 | 1 | 78 |
| F | 3.70 | 2.68 | .32 | |
| Research Team | | | | |
| MS | 2.09 | .81 | 2.5 | .85 |
| df | 1 | 1 | 1 | 79 |
| F | 2.45 | .95 | 2.92 | |
| Dissertation Research | | | | |
| MS | .04 | .001 | .06 | .35 |
| df | 1 | 1 | 1 | 79 |
| F | .12 | .002 | .107 | |

** p<.01
*** p<.001

Table 4. Two-way ANOVA's on career mentor factors, sex by career mentor.

| Scale | Sex | Mentor | S x M | Residual |
|---|---|---|---|---|
| Political Considerations | | | | |
| MS | 4.55 | 9.71 | .002 | 2.69 |
| df | 1 | 1 | 1 | 72 |
| F | 1.69 | 3.61 | .001 | |
| Friendship | | | | |
| MS | 9.97 | 1.02 | 7.14 | .65 |
| df | 1 | 1 | 1 | 72 |
| F | 15.34*** | 1.57 | 10.98*** | |
| Subsequent Job Seeking | | | | |
| MS | 4.40 | .07 | 1.97 | 1.99 |
| df | 1 | 1 | 1 | 74 |
| F | 2.21 | .03 | .99 | |
| First Job Seeking | | | | |
| MS | 8.40 | 1.17 | 1.14 | 3.62 |
| df | 1 | 1 | 1 | 72 |
| F | 2.32 | .32 | .31 | |
| Research & Publishing | | | | |
| MS | .24 | 12.55 | .13 | 2.38 |
| df | 1 | 1 | 1 | 74 |
| F | .10 | 5.27* | .05 | 5.27 |
| Moral Support | | | | |
| MS | .67 | .44 | .05 | .47 |
| df | 1 | 1 | 1 | 74 |
| F | 1.42 | .94 | .12 | |

*p<.05
***p<.001